GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of analytes):

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

(NO CODE) = Confirmed identification.

- B = Not detected substantially above the level reported in laboratory or field blanks.
- R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
- N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

- J = Analyte Present. Reported value may not be accurate or precise.
- K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.
- UL = Not detected, quantitation limit is probably higher.

OTHER CODES

- NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.
- O = No analytical result.

Appendix B

Data Summary Forms

SDG: C0071

Number of Soil Samples: 20

Site:

LEMON RIDGE GARDEN

Number of Water Samples: 0 Number of Sediment Samples: 0

Lab.: MITKEM

Sample Number :	пиштоп	C0071		C0072		C0073		C0074RE	********	C0075RE	*********
Sampling Location : (Prefix: LRGI)		-DUP-01		-DUP-02		-SB-01-02	03	-SB-02-02	203	-SB-03-020	3
Field QC:	į.	Dup of C00	077	Dup of C00	086		P00083				
Matrix:		Soil	1	Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008	ez.	12/22/2008	В	12/22/2008	
Time Sampled :		10:00		15:25		08:25		08:40		09:00	
%Moisture :		19		20		16		19		20	
Dilution Factor :		0.83		1.09		1.0		0.88		0.86	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0				UJ		UJ				
Chloromethane	5.0				UJ		UJ				
Vinyl chloride	5.0				UJ		UJ				1
Bromomethane	5.0				UJ		UJ				
Chloroethane	5.0				UJ		IJ				
Trichlorofluoromethane	5.0				UJ		UJ				
1,1-Dichloroethene	5.0				UJ		UJ				
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0				UJ		UJ				1
Acetone	10				UJ		UJ				
Carbon disulfide	5.0				UJ		UJ				
Methyl acetate	5.0				UJ		UJ				ı
Methylene chloride	5.0				UJ		UJ				
trans-1,2-Dichloroethene	5.0				UJ		UJ				ı
Methyl tert-butyl ether	5.0				UJ		UJ				
1,1-Dichloroethane	5.0			1	UJ		UJ				
cis-1,2-Dichloroethene	5.0				UJ		UJ				
2-Butanone	10	8			UJ		UJ	g i a		. 4	ŀ
Bromochloromethane	5.0				UJ		UJ				
Chloroform	5.0			Park to	UJ		UJ				
1,1,1-Trichloroethane	5.0				UJ		UJ		UJ		
Cyclohexane	5.0	100	100	1211	UJ		UJ	ař o	UJ		-
Carbon tetrachloride	5.0				UJ		UJ		UJ) (1
Benzene	5.0				UJ		UJ		UJ	1	1
1,2-Dichloroethane	5.0				UJ		UJ				
1,4-Dioxane	100		R		R		R		R		R
Trichloroethene	5.0				UJ		UJ		UJ		
Methylcyclohexane	5.0	1			υJ		UJ		UJ		
1,2-Dichloropropane	5.0				UJ		UJ		UJ		
Bromodichloromethane	5.0				UJ		UJ		UJ		
cis-1,3-Dichloropropene	5.0				UJ		UJ		UJ		UL
4-Methyl-2-pentanone	10			1	UJ		UJ		UJ		R
Toluene	5.0				UJ		UJ		UJ		
trans-1,3-Dichloropropene	5.0				UJ		UJ		UJ		UL

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0071		C0072	9	C0073		C0074RE		C0075RE	
Sampling Location : (Prefix: LRGI)		-DUP-01		-DUP-02		-SB-01-020	03	-SB-02-02	03	-SB-03-020	3
Field QC:		Dup of C00	77	Dup of C00	186						
Matrix:		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008 12		12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		10:00 15		15:25		08:25		08:40		09:00	
%Moisture :		19		20		16		19		20	
Dilution Factor :				1.09		1.0		0.88		0.86	
Volatile Compound	CRQL	Result Flag		Result Flag		THE RESERVE OF THE PARTY OF THE		Result Flag		Result	Flag
1,1,2-Trichloroethane	5.0				UJ	CTI COLOR STATE OF ST	UJ		UJ		UL
Tetrachloroethene	5.0				UJ		UJ		UJ		ı
2-Hexanone	10				UJ		UJ	1	UJ		R
Dibromochloromethane	5.0				UJ	8	UJ		UJ		1
1,2-Dibromoethane	5.0				UJ		UJ		UJ		
Chlorobenzene	5.0				UJ	gar n	UJ		UJ		
Ethylbenzene	5.0				UJ		UJ		UJ		1
o-Xylene	5.0				UJ		UJ		UJ		1
m,p-Xylene	5.0				UJ		UJ		UJ		1
Styrene	5.0				UJ		UJ		UJ		
Bromoform	5.0				UJ		UJ	į į	UJ		UJ
Isopropylbenzene	5.0	55	F I		UJ		UJ	ē.	UJ		
1,1,2,2-Tetrachloroethane	5.0				UJ		UJ		UJ		1
1,3-Dichlorobenzene	5.0				UJ		UJ	l	UJ		UJ
1,4-Dichlorobenzene	5.0				UJ		UJ		UJ		UJ
1,2-Dichlorobenzene	5.0				UJ		UJ		UJ		UJ
1,2-Dibromo-3-chloropropane	5.0				UJ		UJ		UJ		UJ
1,2,4-Trichlorobenzene	5.0				UJ		UJ		UJ	11	UJ
1,2,3-Trichlorobenzene	5.0				UJ		UJ		UJ		UJ

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :	hinominu.	C0076RE		C0077RE		C0078RE		C0079	*********	C0080	***************************************
Sampling Location : (Prefix: LRGI)		-SB-04-020	3	-SB-05-020	3	-SB-06-02	03	-SB-07-02	203	-SS-01	
Field QC:				Dup of C00	071						
Matrix:		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008		12/22/2008	3	12/22/2008	
Time Sampled :		09:20		09:50		10:20		11:05		08:10	
%Moisture :		15		19		20		16		14	
Dilution Factor:		0.83		0.82		0.98		0.86		1.0	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0		UJ		UJ				UJ		
Chloromethane	5.0		UJ		UJ				UJ		
Vinyl chloride	5.0		UJ		UJ				UJ	1	1
Bromomethane	5.0		UJ		UJ				UJ		
Chloroethane	5.0		UJ		UJ				UJ		
Trichlorofluoromethane	5.0		UJ		UJ				UJ.		
1,1-Dichloroethene	5.0		UJ		υJ				UJ		1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0		UJ		UJ				UJ		
Acetone	10		UJ		UJ		R		UJ		1
Carbon disulfide	5.0		UJ		UJ			4	ŲJ		
Methyl acetate	5.0		UJ		UJ				UJ	3	1
Methylene chloride	5.0		UJ		UJ				UJ		
trans-1,2-Dichloroethene	5.0	×.	UJ		UJ				UJ	Á	
Methyl tert-butyl ether	5.0		UJ		UJ				UJ		
1,1-Dichloroethane	5.0		UJ		UJ	je i			UJ		
cis-1,2-Dichloroethene	5.0		UJ		UJ				UJ		
2-Butanone	10		UJ		UJ		R		UJ		
Bromochloromethane	5.0		UJ		UJ				UJ		
Chloroform	5.0		UJ		UJ				UJ		
1,1,1-Trichloroethane	5.0		UJ		UJ		UJ		UJ		
Cyclohexane	5.0	9	UJ		UJ		UJ		UJ		
Carbon tetrachloride	5.0		UJ		UJ		UJ		UJ		
Benzene	5.0	. 126 si	UJ		UJ		UJ		UJ		
1,2-Dichloroethane	5.0		UJ		UJ			(UJ		
1,4-Dioxane	100	27	R		R		R	1	R		R
Trichloroethene	5.0		UJ		UJ		UJ		UJ		
Methylcyclohexane	5.0		UJ		UJ		ÚJ		UJ		
1,2-Dichloropropane	5.0		UJ		UJ		UJ		UJ	1	
Bromodichloromethane	5.0		UJ		ÜJ		UJ	k A	UJ		
cis-1,3-Dichloropropene	5.0		UJ		UJ		UJ	7) U 15	UJ		
4-Methyl-2-pentanone	10		R		R		R		υJ	İ	
Toluene	5.0		UJ		UJ		UJ	je.	UJ		
trans-1,3-Dichloropropene	5.0		UJ		IJ	Common man	UJ		UJ		

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0076RE		C0077RE	*********	C0078RE	**********	C0079		C0080	B-117-13-14
Sampling Location : (Prefix: LRGI)		-SB-04-020	3	-SB-05-020	3	-SB-06-02	03	-SB-07-02	203	-SS-01	
Field QC:				Dup of C00	071			D.M.KWIGHW AND			
Matrix:		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg ug/k		ug/Kg	ug/Kg			ug/Kg		ug/Kg	
Date Sampled :		12/22/2008 12/		12/22/2008				12/22/2008	В	12/22/2008	
Time Sampled :				09:50		10:20		11:05		08:10	
%Moisture:		15 19		19		20		16	- 11	14	
Dilution Factor:						0.98		0.86		1.0	
Volatile Compound	CRQL	Result Flag		Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0		UJ		UJ		UJ		UJ		
Tetrachloroethene	5.0		UJ		UJ	A	UJ		UJ		1
2-Hexanone	10		R		R		R		UJ		1
Dibromochloromethane	5.0		UJ		UJ		UJ		UJ		
1,2-Dibromoethane	5.0		UJ		UJ		UJ	٠	UJ		1
Chlorobenzene	5.0		UJ		UJ		UJ		UJ.		
Ethylbenzene	5.0		UJ		UJ		UJ		UJ		1
o-Xylene	5.0		UJ		UJ		UJ		UJ		l
m,p-Xylene	5.0		UJ		UJ		UJ		UJ		1
Styrene	5.0	1	UJ		UJ		UJ		UJ		l
Bromoform	5.0		UJ		UJ		UJ		UJ		1
Isopropylbenzene	5.0		UJ		UJ		UJ		UJ		1
1,1,2,2-Tetrachloroethane	5.0		UJ	1	UJ		UJ		UJ		1
1,3-Dichlorobenzene	5.0		UJ		UJ		UJ		UJ		1
1,4-Dichlorobenzene	5.0		UJ		UJ		UJ		UJ	10	1
1,2-Dichlorobenzene	5.0		UJ		UJ		UJ		UJ		1
1,2-Dibromo-3-chloropropane	5.0		UJ		UJ		UJ		UJ		
1,2,4-Trichlorobenzene	5.0		UJ		UJ		UJ		UJ		1
1,2,3-Trichlorobenzene	5.0		UJ		UJ		UJ		UJ		1

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :	***************************************	C0081		C0082	*****	C0084	*********	C0085RE	CALDOO COMMISSION OF THE PERSON OF THE PERSO	C0086	**********
Sampling Location : (Prefix: LRGI)		-SS-02		-SS-03		-SS-05		-SS-06		-SS-07	
Field QC:										Dup of C00	72
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008		12/22/2008	3	12/22/2008	
Time Sampled :		08:25		08:50		09:40		10:05		10:25	
%Moisture :		26		16		20		24		19	
Dilution Factor :		1.32		0.88		1.25		1.06		1.09	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0						UJ				
Chloromethane	5.0						UJ				1
Vinyl chloride	5.0				1		UJ				
Bromomethane	5.0				1		UJ				
Chloroethane	5.0						UJ				1
Trichlorofluoromethane	5.0				l		UJ				
1,1-Dichloroethene	5.0		l				UJ		1		
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0				l		UJ				
Acetone	10				1		UJ			2 ·	
Carbon disulfide	5.0				l		UJ				
Methyl acetate	5.0		- 2		1	16	UJ				
Methylene chloride	5.0		1		1		UJ				
trans-1,2-Dichloroethene	5.0		1	18	l		UJ		1		
Methyl tert-butyl ether	5.0				1		UJ				
1,1-Dichloroethane	5.0						UJ				
cis-1,2-Dichloroethene	5.0						UJ				
2-Butanone	10						UJ				1
Bromochloromethane	5.0						UJ				I
Chloroform	5.0				ı	i.e	UJ				1
1,1,1-Trichloroethane	5.0				1		UJ				
Cyclohexane	5.0		100			en ^{est}	UJ	B.,			1
Carbon tetrachloride	5.0			l	1		UJ	l			1
Benzene	5.0			×		L.	UJ				1
1,2-Dichloroethane	5.0	1		İ			UJ		1		1
1,4-Dioxane	100	=	R	-	R		R		R		R
Trichloroethene	5.0					1	UJ	1			
Methylcyclohexane	5.0	FF 2 0		3	85	2 2 1	UJ			Re .	1
1,2-Dichloropropane	5.0						UJ		l		l
Bromodichloromethane	5.0	Ľ.		Re '		W X 4	υJ			^	1
cis-1,3-Dichloropropene	5.0						UJ				1
4-Methyl-2-pentanone	10		1	S .	F		UJ				
Toluene	5.0		l				UJ		1		1
trans-1,3-Dichloropropene	5.0			172.0000 DOMESTIC TO STORE OF THE			UJ				1

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0081		C0082		C0084		C0085RE		C0086	
Sampling Location : (Prefix: LRGI)		-SS-02		-SS-03		-SS-05		-SS-06		-SS-07	
Field QC:										Dup of C00	072
Matrix:		Soil		Soil		Soil		Soil		Soil	
Units:	- 6	ug/Kg		ug/Kg	ug/Kg			ug/Kg		ug/Kg	
Date Sampled:	50	12/22/2008		12/22/2008		12/22/2008		12/22/2008	3	12/22/2008	
Time Sampled :		08:25 08:		08:50		09:40		10:05		10:25	
%Moisture:		26 16		16		20		24		19	
Dilution Factor :	CONTRACTOR CONTRACTOR	1.32 0.8		0.88		1.25		1.06		1.09	. No recommendation
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0						UJ				
Tetrachloroethene	5.0						UJ				1
2-Hexanone	10						UJ				1
Dibromochloromethane	5.0				-		UJ				1
1,2-Dibromoethane	5.0						UJ				
Chlorobenzene	5.0						UJ				1
Ethylbenzene	5.0						UJ				1
o-Xylene	5.0						UJ				1
m,p-Xylene	5.0						UJ				1
Styrene	5.0						UJ				l
Bromoform	5.0						UJ		UJ		
Isopropylbenzene	5.0					- 1	UJ				l
1,1,2,2-Tetrachloroethane	5.0						UJ	100			1
1,3-Dichlorobenzene	5.0						UJ		UJ		1
1,4-Dichlorobenzene	5.0						ŲJ		UJ		1
1,2-Dichlorobenzene	5.0				8		UJ		UJ		1
1,2-Dibromo-3-chloropropane	5.0		l				UJ		UJ		1
1,2,4-Trichlorobenzene	5.0			The Parket			UJ		UJ		17
1,2,3-Trichlorobenzene	5.0						UJ		UJ		1

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0087		C0088	MANAGE AND ADDRESS OF THE PARTY	C0089RE		C0090RE	*************	C0091	
Sampling Location : (Prefix: LRGI)		-SS-04		-SB-08-020	3	-SB-09-02	03	-SB-10-02	203	-SB-11-020	3
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled:		12/22/2008		12/22/2008		12/22/2008		12/22/200	8	12/22/2008	
Time Sampled :		09:15		11:25		11:40		12:10		12:45	
%Moisture :		15		18		20	8	19		18	
Dilution Factor :		0.83		0.88		0.91		0.79		0.91	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0						2 42				
Chloromethane	5.0										
Vinyl chloride	5.0					Es :					
Bromomethane	5.0										
Chloroethane	5.0			. 2							
Trichlorofluoromethane	5.0										
1,1-Dichloroethene	5.0										
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0										
Acetone	10										
Carbon disulfide	5.0										
Methyl acetate	5.0					1					
Methylene chloride	5.0			55							
trans-1,2-Dichloroethene	5.0								-		
Methyl tert-butyl ether	5.0										
1,1-Dichloroethane	5.0										1
cis-1,2-Dichloroethene	5.0				l						
2-Butanone	10	-		2							
Bromochloromethane	5.0										
Chloroform	5.0				1						
1,1,1-Trichloroethane	5.0						UJ		UJ		
Cyclohexane	5.0			-			UJ		UJ		
Carbon tetrachloride	5.0				1		UJ		UJ		
Benzene	5.0				1		UJ		UJ		
1,2-Dichloroethane	5.0		1		1						
1,4-Dioxane	100		R		R		R		R		R
Trichloroethene	5.0						UJ		UJ		
Methylcyclohexane	5.0				1		UJ		UJ		
1,2-Dichloropropane	5.0						UJ		UJ		
Bromodichloromethane	5.0		1			1	UJ		UJ		
cis-1,3-Dichloropropene	5.0	1	1		1		UJ		UJ		
4-Methyl-2-pentanone	10	l	1		R		UJ		UJ		1
Toluene	5.0		1				UJ	1	UJ		1
trans-1,3-Dichloropropene	5.0		L				UJ		υJ		

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0087		C0088		C0089RE		C0090RE		C0091	
Sampling Location : (Prefix: LRGI)		-SS-04		-SB-08-020	3	-SB-09-020	3	-SB-10-02	203	-SB-11-020	3
Matrix:		Soil		Soil		Soil		Soil		Soil	
Units:	1	ug/Kg		ug/Kg	ug/Kg			ug/Kg		ug/Kg	
Date Sampled :	-	12/22/2008 12/		12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		09:15 11		11:25		11:40		12:10		12:45	
%Moisture:		15		18		20		19		18	
Dilution Factor :		0.83				0.91		0.79		0.91	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0						UJ		UJ		Г
Tetrachloroethene	5.0						UJ		UJ		1
2-Hexanone	10				R		UJ		UJ		1
Dibromochloromethane	5.0		1				UJ		UJ		1
1,2-Dibromoethane	5.0		1				UJ		UJ		1
Chlorobenzene	5.0			100			UJ		UJ		1
Ethylbenzene	5.0						UJ		UJ		1
o-Xylene	5.0	1					UJ		UJ		1
m,p-Xylene	5.0	1					UJ	1	UJ		1
Styrene	5.0	2					UJ	l	UJ		
Bromoform	5.0	1					UJ		UJ	L	l
Isopropylbenzene	5.0	1			1	P	UJ		UJ.		l
1,1,2,2-Tetrachloroethane	5.0		1				UJ	l .	UJ		
1,3-Dichlorobenzene	5.0	i	1	1			UJ		UJ		
1,4-Dichlorobenzene	5.0	l	l				UJ		UJ		1
1,2-Dichlorobenzene	5.0	1					UJ		UJ		1
1,2-Dibromo-3-chloropropane	5.0	1	1				UJ		UJ		1
1,2,4-Trichlorobenzene	5.0						UJ		UJ		
1,2,3-Trichlorobenzene	5.0						UJ		UJ		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

SDG: C0092

Number of Soil Samples: 4

Site:

LEMON RIDGE GARDEN

Number of Water Samples: 0

Lab.:

MITKEM

Number of Sediment Samples: 0

Sample Number :		C0092	CONTRACTOR OF THE PARTY OF THE	C0093	*********	C0094	~~~	C0095	**********		
Sampling Location : (Prefix: LRGI)		-SS-08		-SS-09		-SS-10		-SS-11			
Matrix :		Soil		Soil		Soil		Soil			
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		12/22/200	80	12/22/200	08	12/22/200	08	12/22/200	08		
Time Sampled :		13:30	8	11:55		12:20		13:00			
%Moisture :		23		25		20		26			
Dilution Factor :		1.04		0.89		0.89		1.09			
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0										
Chloromethane	5.0										
Vinyl chloride	5.0										
Bromomethane	5.0										
Chloroethane	5.0										
Trichlorofluoromethane	5.0										
1,1-Dichloroethene	5.0										
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0										
Acetone	10										
Carbon disulfide	5.0										
Methyl acetate	5.0										
Methylene chloride	5.0										
trans-1,2-Dichloroethene	5.0			, r			es en l				
Methyl tert-butyl ether	5.0										
1,1-Dichloroethane	5.0							n 4-			
cis-1,2-Dichloroethene	5.0										
2-Butanone	10	-51		iga s		Park XI		1808 0			
Bromochloromethane	5.0						H				
Chloroform	5.0										
1,1,1-Trichloroethane	5.0										
Cyclohexane	5.0					1				1	
Carbon tetrachloride	5.0					1					
Benzene	5.0	1									
1,2-Dichloroethane	5.0								2		
1,4-Dioxane	100		R		R		R		R	1	
Trichloroethene	5.0									1	
Methylcyclohexane	5.0		l								
1,2-Dichloropropane	5.0		1							1	
Bromodichloromethane	5.0		1			1		ł	1	1	1
cis-1,3-Dichloropropene	5.0		l				l				
4-Methyl-2-pentanone	10	1	1			l l	1		1		
Toluene	5.0		1	l		1					
trans-1,3-Dichloropropene	5.0										

SDG: C0092

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0092		C0093		C0094		C0095			
Sampling Location : (Prefix: LRGI)		-SS-08		-SS-09		-SS-10		-SS-11			
Matrix:		Soil		Soil		Soil		Soil			
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		12/22/2008 1		12/22/20	80	12/22/20	80	12/22/20	80		
Time Sampled :		13:30		11:55		12:20		13:00			
%Moisture:		23		25		20		26			
Dilution Factor:				0.89		0.89		1.09			
Volatile Compound	CRQL	CRQL Result Flag		Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0										
Tetrachloroethene	5.0				l						
2-Hexanone	10										
Dibromochloromethane	5.0		1		1						
1,2-Dibromoethane	5.0				1						
Chlorobenzene	5.0			i i							
Ethylbenzene	5.0			İ							
o-Xylene	5.0				1						1
m,p-Xylene	5.0										l
Styrene	5.0										1
Bromoform	5.0				1						1
Isopropylbenzene	5.0										١
1,1,2,2-Tetrachloroethane	5.0		1		1						1
1,3-Dichlorobenzene	5.0				1						l
1,4-Dichlorobenzene	5.0				1		1	L			
1,2-Dichlorobenzene	-5.0				1						1
1,2-Dibromo-3-chloropropane	5.0		l		1		1				1
1,2,4-Trichlorobenzene	5.0			1		i	1	1		1	1
1,2,3-Trichlorobenzene	5.0										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Number of Soil Samples: 20

Number of Water Samples: 0

Number of Sediment Samples: 0.

Sample Number :				C0072	warrann.	C0073	reneas.	C0074		C0075	romon.
Sampling Location : (Prefix: LRGI)		-DUP-01		-DUP-02		-SB-01-0203	3	-SB-02-020	03	-SB-03-020	03
Field QC:		Dup of C00	770	Dup of C00	86						
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		10:00		15:25		08:25		08:40		09:00	
%Moisture :		19		20		16		19		20	
Dilution Factor :		0.98		0.99		0.99/7.92		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	170										П
Phenol	170								1		1 1
Bis(2-chloroethyl)ether	170										1 1
2-Chlorophenol	170										
2-Methylphenol	170					22	J				
2,2'-Oxybis(1-chloropropane)	170										1 1
Acetophenone	170										1 1
4-Methylphenol	170					65	J				
N-Nitroso-di-n-propylamine	170	S 94				l					
Hexachloroethane	170		l			1					
Nitrobenzene	170										
Isophorone	170					1					1 1
2-Nitrophenol	170			1		l					1 1
2,4-Dimethylphenol	170					34	J				
Bis(2-chloroethoxy)methane	170										
2,4-Dichlorophenol	170					1					
Naphthalene	170		5 17	73	J	1400	k	150	J		
4-Chloroaniline	170										
Hexachlorobutadiene	170	OH A		c :			9			-	
Caprolactam	170					0)					
4-Chloro-3-methylphenol	170			<u> </u>					1		
2-Methylnaphthalene	170			37	J	750		110	J		
Hexachlorocyclopentadiene	170			u soon			υJ				
2,4,6-Trichlorophenol	170										
2,4,5-Trichlorophenol	170										
1,1'-Biphenyl	170					210		23	J		
2-Chloronaphthalene	170		-		1			L INVENT			
2-Nitroaniline	330							1	1		
Dimethylphthalate	170		l	1	1		1				
2,6-Dinitrotoluene	170		l		1				1		
Acenaphthylene	170	l		28	J	420		150	J		
3-Nitroaniline	330						1				
Acenaphthene	170			130	J	1600		210			

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0071	~ [전략되었다.			C0073		C0074		C0075	***********
Sampling Location : (Prefix: LRGI)		-DUP-01		-DUP-02		-SB-01-0203	3	-SB-02-020	03	-SB-03-020	03
Field QC:		Dup of C00	77	Dup of C00	86						
Matrix:		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		10:00		15:25		08:25		08:40		09:00	
%Moisture :		19		20		16		19		20	
Dilution Factor :		0.98		0.99		0.99/7.92		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	330						R				Т
4-Nitrophenol	330								1		1
Dibenzofuran	170			83	J	1500		180	J		l
2,4-Dinitrotoluene	170							2 2			1
Diethylphthalate	170										1
Fluorene	170			110	J	1100		190	J		1
4-Chlorophenyl-phenylether	170										1
4-Nitroaniline	330				1			1			1
4,6-Dinitro-2-methylphenol	330				1		UJ	1			
N-Nitrosodiphenylamine	170				1					¥.	1
1,2,4,5-Tetrachlorobenzene	170										1
4-Bromophenyl-phenylether	170			12	l				1	1	1
Hexachlorobenzene	170				1						
Atrazine	170				l					1	ı
Pentachlorophenol	330				1					1	1
Phenanthrene	170	100	J	1300	l	22000 +		2700		26	J
Anthracene	170	37	J	280	1	2400		470			
Carbazole	170			150	J	1600		280			1
Di-n-butylphthalate	170	38	В	61	В	46	В	190	В	43	В
Fluoranthene	170	220		1400	l	21000 +		2900		83	J
Pyrene	170	210	J	1300	I	19000 +	l	2700	1	76	J
Butylbenzylphthalate	170			ANTESS						1,570	
3,3'-Dichlorobenzidine	170		1	É			l		1		1
Benzo(a)anthracene	170	160	J	830		12000 +		1600		53	J
Chrysene	170	120	J	630		11000 +	1	1700		49	J
Bis(2-ethylhexyl)phthalate	170			99	J		Si n	74	J		1
Di-n-octylphthalate	170				1				1		1
Benzo(b)fluoranthene	170	150	J	790	1	14000 +		1900		65	J
Benzo(k)fluoranthene	170	90	J	410	1	2100		1100	1	27	J
Benzo(a)pyrene	170	120	Ĵ	590	1	9500 +		1400	1	43	J
Indeno(1,2,3-cd)pyrene	170	65	J	340	1	4700 +	1	890	1	26	J
Dibenzo(a,h)anthracene	170	25	J	120	J	1400	1	310	1	"	
Benzo(g,h,i)perylene	170	42	J	160	Ĵ	1600	l	470			1
2,3,4,6-Tetrachlorophenol	170						1				1

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

^{+ =} Results reported from dilution

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :	**********	C0076		C0077	*******	C0078	**********	C0079	**********	C0080	
Sampling Location : (Prefix: LRGI)		-SB-04-020	3	-SB-05-020	3	-SB-06-020	3	-SB-07-02	03	-SS-01	
Field QC:				Dup of C00							
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		09:20		09:50		10:20		11:05		08:10	
%Moisture :		15		19		20		16		14	
Dilution Factor :		1.0		0.99		1.0		1.0		0.99	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Resul	t Flag	Result	Flag	Result	Flag
Benzaldehyde	170	100	J								
Phenol	170						1		1		1
Bis(2-chloroethyl)ether	170						1	1			ı
2-Chlorophenol	170						1		1		ı
2-Methylphenol	170						1				1
2,2'-Oxybis(1-chloropropane)	170								1		1
Acetophenone	170						1		l		1
4-Methylphenol	170					l			1	1	1
N-Nitroso-di-n-propylamine	170						1		1		1
Hexachloroethane	170				7		1				1
Nitrobenzene	170						1		1	1	1
Isophorone	170						1	la .		1	1
2-Nitrophenol	170						1				l
2,4-Dimethylphenol	170					1	1		1		1
Bis(2-chloroethoxy)methane	170						1		1	1	ı
2,4-Dichlorophenol	170		1				1		ı		1
Naphthalene	170					38	J	36	J	26	J
4-Chloroaniline	170						1		ı	1	1
Hexachlorobutadiene	170		1				1				1
Caprolactam	170		1				1		1		1
4-Chloro-3-methylphenol	170				ı		1		ı		l
2-Methylnaphthalene	170					44	J			22	J
Hexachlorocyclopentadiene	170	l							1	moto	UJ
2,4,6-Trichlorophenol	170					N 9	1	11 700	1		
2,4,5-Trichlorophenol	170					l			1	I	1
1,1'-Biphenyl	170					3.0	1		1	62V -	1
2-Chloronaphthalene	170		1			1	1		1		1
2-Nitroaniline	330	1		- *		=	1		1		1
Dimethylphthalate	170				1		1		1		1
2,6-Dinitrotoluene	170				1		1		1		1
Acenaphthylene	170				l	25	J	32	J	59	J
3-Nitroaniline	330				-		1		1		1
Acenaphthene	170					73	J	79	J	37	J

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0076	6		C0077		C0078		C0079		C0080	
Sampling Location : (Prefix: LRGI)		-SB-C	04-020	3	-SB-05-020	3	-SB-06-0203		-SB-07-020)3	-SS-01	
Field QC:					Dup of C00	71				08.00		
Matrix :		Soil			Soil		Soil		Soil		Soil	
Units:		ug/Kg			ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22			12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		09:20			09:50		10:20		11:05		08:10	
%Moisture :		15			19		20		16		14	
Dilution Factor :		1.0			0.99		1.0		1.0		0.99	
Semivolatile Compound	CRQL	F	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	330											UJ
4-Nitrophenol	330						Í					
Dibenzofuran	170						49	J	47	J	27	J
2,4-Dinitrotoluene	170											
Diethylphthalate	170											1
Fluorene	170						89	J	72	J	37	J
4-Chlorophenyl-phenylether	170						1					1
4-Nitroaniline	330	1									8	
4,6-Dinitro-2-methylphenol	330			1								1
N-Nitrosodiphenylamine	170			1		[1
1,2,4,5-Tetrachlorobenzene	170			1		1						l
4-Bromophenyl-phenylether	170			1		l						1
Hexachlorobenzene	170			1		l						1
Atrazine	170			1		1						1
Pentachlorophenol	330			l		l	i					
Phenanthrene	170				80	J	900		860		530	l
Anthracene	170			1			220		210	8	130	J
Carbazole	170			1		l	79	J	110	J	61	J
Di-n-butylphthalate	170	Ø 8	35	В	41	В	40	В	47	В	260	В
Fluoranthene	170			1	130	J	1100		1200		810	
Pyrene	170	iit a		13	120	J	900	100	1000		800	1
Butylbenzylphthalate	170			1								
3,3'-Dichlorobenzidine	170			ı	5 5				E 1			1
Benzo(a)anthracene	170			1	81	J	600		710		580	1
Chrysene	170	1		i	72	J	490		590	l	500	1
Bis(2-ethylhexyl)phthalate	170			1							75	J
Di-n-octylphthalate	170			1		1		1	1	l	1	1
Benzo(b)fluoranthene	170	1			99	J	650		850	1	740	J
Benzo(k)fluoranthene	170	1			35	J	260	ı	290	1	380	1
Benzo(a)pyrene	170			1	68	J	430		580	1	490	1
Indeno(1,2,3-cd)pyrene	170			1	39	J	260		350	l	340	1
Dibenzo(a,h)anthracene	170	l		1			96	J	120	J	120	J
Benzo(g,h,i)perylene	170	1		1		1	83	J	160	J	280	
2,3,4,6-Tetrachlorophenol	170											

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Comple Number		C0081		C0082		00004	mun	COOSE		COORC	
Sample Number :		242000000000000000000000000000000000000	į.	-SS-03		C0084		C0085		C0086	
Sampling Location : (Prefix: LRGI)		-SS-02		-55-03		-SS-05		-SS-06		-SS-07	070
Field QC:		0-11	1	0-7		0-11		0-11		Dup of C0	0/2
Matrix:		Soil	1	Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008	B	12/22/2008		12/22/2008	
Time Sampled :		08:25		08:50		09:40	- 8	10:05		10:25	
%Moisture :		26		16		20		24		19	
Dilution Factor :		1.0/2.0	-	0.99	-	0.99/99		1.0/8.0		0.99	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	WHEN PARTY NAMED IN	Result	Flag
Benzaldehyde	170							87	J		
Phenol	170					55	J				
Bis(2-chloroethyl)ether	170					1					
2-Chlorophenol	170				l						
2-Methylphenol	170					-				2 2	
2,2'-Oxybis(1-chloropropane)	170										
Acetophenone	170							58	J		
4-Methylphenol	170							78	J		
N-Nitroso-di-n-propylamine	170				1						
Hexachloroethane	170										
Nitrobenzene	170			1	1	1					
Isophorone	170						1				
2-Nitrophenol	170				1					1	
2,4-Dimethylphenol	170										
Bis(2-chloroethoxy)methane	170									25	
2,4-Dichlorophenol	170										
Naphthalene	170	390				220		510		31	J
4-Chloroaniline	170		R								
Hexachlorobutadiene	170					1					
Caprolactam	170					3					
4-Chloro-3-methylphenol	170		-					1			
2-Methylnaphthalene	170	320				160	J	360		24	J
Hexachlorocyclopentadiene	170		R		1	300	UJ		UJ		
2,4,6-Trichlorophenol	170	l									
2,4,5-Trichlorophenol	170					1		l		l.	
1,1'-Biphenyl	170	40	J			36	J	93	J		
2-Chloronaphthalene	170					81 V_ 2					
2-Nitroaniline	330										
Dimethylphthalate	170	B 0	l								
2,6-Dinitrotoluene	170		l								
Acenaphthylene	170	310		45	J	330		1400		64	J
3-Nitroaniline	330	8.5									
Acenaphthene	170	210	J	33	J	410		1100		97	J

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0081		C0082		C0084		C0085	CONCORD	C0086	· · · · · · · · · · · · · · · · · · ·
Sampling Location : (Prefix: LRGI)		-SS-02		-SS-03		-SS-05		-SS-06		-SS-07	
Field QC:										Dup of C00	072
Matrix :		Soil	18	Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg	,	ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008	1000	12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		08:25		08:50		09:40		10:05		10:25	
%Moisture :		26		16		20		24		19	
Dilution Factor :		1.0/2.0		0.99		0.99/99		1.0/8.0		0.99	
Semivolatile Compound	CRQL		Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	330		R				R		R		
4-Nitrophenol	330					1 1					1
Dibenzofuran	170	230	J	22	J	260		770		53	J .
2,4-Dinitrotoluene	170										1
Diethylphthalate	170										1
Fluorene	170	210	J	32	J	420		1200		87	J
4-Chlorophenyl-phenylether	170	1700.50									
4-Nitroaniline	330								l		l
4,6-Dinitro-2-methylphenol	330		IJ				UJ		UJ		1
N-Nitrosodiphenylamine	170				1		porter s			1	1
1,2,4,5-Tetrachlorobenzene	170				1						1
4-Bromophenyl-phenylether	170			l	h 1					l	1
Hexachlorobenzene	170				1						1
Atrazine	170		i	la -			ğ: İ			1	1
Pentachlorophenol	330				l				l	i i	1
Phenanthrene	170	3300		540	-	10000 +	J	17000 +	1	1200	1
Anthracene	170	730		110	J	1300		3300	l	260	l
Carbazole	170	450		70	Ĵ	590		1800	l	120	J
Di-n-butylphthalate	170	620	1	48	В	390		6600 +	1	81	В
Fluoranthene	170	4500 +	1	900		16000 +	J	21000 +	l	1700	
Pyrene	170	3500		770	1	15000 +	J	26000 +	l	1500	1
Butylbenzylphthalate	170		1	1.1.4	1	360	ľ	1700	l	38	J
3.3'-Dichlorobenzidine	170	1	R		1				l	"	ľ
Benzo(a)anthracene	170	2600	l "	530	1	2800		14000 +		980	1
Chrysene	170	2300	1	460	1	7900 +	J	16000 +		820	
Bis(2-ethylhexyl)phthalate	170	450	1	59	J	220000 +	ľ	20000 +	1	530	1
Di-n-octylphthalate	170	1 700		"	ľ	650		160	J		1
	170	2800	1.	540	1	10000 +	١,	17000 +	ľ	1000	1
Benzo(b)fluoranthene Benzo(k)fluoranthene	170	1500	ľ	330		1500	ľ	2400	1	560	1
Benzo(a)pyrene	170	2100	1	400	1	2900	1	13000 +		760	
The state of the s	170	1500	1	250	1	2100	ı	7300 +	1	470	1
Indeno(1,2,3-cd)pyrene	170	530	ı	89	J	680	l	2100	1	160	J
Dibenzo(a,h)anthracene		1100	1	130	J	1500	1	5300 +	1	190	J
Benzo(g,h,i)perylene 2,3,4,6-Tetrachlorophenol	170 170	1100	1	130	٦	1500		5300 +	1	130	١
CRQL = Contract Required Quantit	-	1		<u> </u>				DDATIVE C		ODE DEFINIT	TICNIC

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

^{+ =} Results reported from dilution

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0087	*********	C0088	~~~~	C0089	and the second	C0090		C0091	***************************************
Sampling Location : (Prefix: LRGI)		-SS-04		-SB-08-020	3	-SB-09-0203	3	-SB-10-020	03	-SB-11-020	03
Matrix:		Soil		Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		09:15		11:25		11:40		12:10		12:45	
%Moisture :		15		18		20		19		18	
Dilution Factor :		0.99/1.99		30.0/120		0.99/15.89		1.0/2.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	170	67	J								
Phenol	170										
Bis(2-chloroethyl)ether	170			81							
2-Chlorophenol	170										
2-Methylphenol	170					42	J				
2,2'-Oxybis(1-chloropropane)	170			330							
Acetophenone	170	100	l								
4-Methylphenol	170	1	-			140	J				
N-Nitroso-di-n-propylamine	170										
Hexachloroethane	170		~								
Nitrobenzene	170					1					
Isophorone	170										
2-Nitrophenol	170										
2,4-Dimethylphenol	170					62	J				
Bis(2-chloroethoxy)methane	170										
2,4-Dichlorophenol	170				l						
Naphthalene	170	72	J	22000		2400		300			
4-Chloroaniline	170										
Hexachlorobutadiene	170										
Caprolactam .	170										
4-Chloro-3-methylphenol	170										
2-Methylnaphthalene	170	55	J	15000		1100		280			
Hexachlorocyclopentadiene	170		UJ	VI VIII.	UJ	1 22 2 10 00 Marin 2 10 4	UJ	MINISTER	UJ		
2,4,6-Trichlorophenol	170		4-	April N		ges in dir.			961		
2,4,5-Trichlorophenol	170					2					
1,1'-Biphenyl	170			3300	J	320		40	J		
2-Chloronaphthalene	170					- FARMENTALES		-			
2-Nitroaniline	330										
Dimethylphthalate	170										
2,6-Dinitrotoluene	170					S1 ±8					
Acenaphthylene	170	210		9000		730		310			
3-Nitroaniline	330		1	26570	1	257		15455			
Acenaphthene	170	180	J	23000		3100		350			

SDG: C0071

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0087		C0088		C0089	PRIMO	C0090	шого	C0091	
Sampling Location: (Prefix: LRG	1)	-SS-04		-SB-08-020	3	-SB-09-0203	3	-SB-10-020)3	-SB-11-020	03
Matrix:		Soil	8	Soil		Soil		Soil		Soil	
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/22/2008		12/22/2008		12/22/2008		12/22/2008		12/22/2008	
Time Sampled :		09:15		11:25		11:40		12:10		12:45	
%Moisture:		15		18		20		19		18	
Dilution Factor :		0.99/1.99		30.0/120		0.99/15.89		1.0/2.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	330		R		UJ		R		R		
4-Nitrophenol	330			1	1						1
Dibenzofuran	170	110	J	10000	1	2300		250			ı
2,4-Dinitrotoluene	170		1		1						ı
Diethylphthalate	170							1			1
Fluorene	170	170	J	24000		3300		360			1
4-Chlorophenyl-phenylether	170							0		5.5	1
4-Nitroaniline	330				1						1
4,6-Dinitro-2-methylphenol	330		UJ		1		UJ		UJ		1
N-Nitrosodiphenylamine	170										1
1,2,4,5-Tetrachlorobenzene	170		1							ci ti	1
4-Bromophenyl-phenylether	170				1						1
Hexachlorobenzene	170		1	W. i		l -	1				1
Atrazine	170		ı					l			
Pentachlorophenol	330		1		1			ŀ			1
Phenanthrene	170	2700		210000 +	1	28000 +		4300 +		110	J
Anthracene	170	600	1 = 1	48000	1	8100 +		1100		23	J
Carbazole	170	300	1	8000	1	4700 +		540		l	
Di-n-butylphthalate	170	240	В			120	В	300	В	48	В
Fluoranthene	170	4200 +		140000 +	1	27000 +		5000 +		170	J
Pyrene	170	4200 +		200000 +	100	26000 +		5200 +		160	J
Butylbenzylphthalate	170					180	J	3000		ur seeming	1
3,3'-Dichlorobenzidine	170		1		1			The state of the s		S-	1
Benzo(a)anthracene	170	2600	1	100000 +	1	17000 +		3000		100	J
Chrysene	170	2200		95000		13000 +		3100	le é	91	J
Bis(2-ethylhexyl)phthalate	170	130	J	1600	J	430		1500		54	J
Di-n-octylphthalate	170					12 00		1500	2		1
Benzo(b)fluoranthene	170	3000	J	94000 +	1	16000 +	1	2700	J	120	J
Benzo(k)fluoranthene	170	1500		32000		3200		1800		67	J
Benzo(a)pyrene	170	2300		86000	1	, 12000 +		2500		84	J
Indeno(1,2,3-cd)pyrene	170	1500		36000	320	5600 +		1600		59	J
Dibenzo(a,h)anthracene	170	480	1	15000	1	2400		690			1
Benzo(g,h,i)perylene	170	1200	1	33000	1	2200	l	1100	1	32	J
2,3,4,6-Tetrachlorophenol	170	100.000	1	100.00	1					573	

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

^{+ =} Results reported from dilution

SDG: C0092

LEMON RIDGE GARDEN

Site: Lab.:

MITKEM

Number of Soil Samples: 4

Number of Water Samples: 0

Number of Sediment Samples: 0

Sample Number :	and the same	C0092	***********	C0093		C0094		C0095	***************************************		WOUNDS
Sampling Location : (Prefix: LRGI)		-SS-08		-SS-09		-SS-10		-SS-11			
Matrix:		Soil		Soil		Soil		Soil			
Units:		ug/Kg		ug/Kg		ug/Kg	100	ug/Kg			
Date Sampled :		12/22/2008	3	12/22/2008		12/22/20	08	12/22/2008			
Time Sampled:		13:30		11:55		12:20		13:00			
%Moisture :		23		25		20		26			
Dilution Factor :		1.0/2.0		1.0/20.0		0.98/1.97		1.0/10.0			
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	170					190	J	110	J		
Phenol	170										
Bis(2-chloroethyl)ether	170	l									
2-Chlorophenol	170										
2-Methylphenol	170			24	J						
2,2'-Oxybis(1-chloropropane)	170							1			
Acetophenone	170							73	J		
4-Methylphenol	170			45	J	32	J				
N-Nitroso-di-n-propylamine	170										
Hexachloroethane	170										
Nitrobenzene	170				i S						
Isophorone	170				1						
2-Nitrophenol	170			£.							
2,4-Dimethylphenol	170										
Bis(2-chloroethoxy)methane	170										
2,4-Dichlorophenol	170		ĺ								
Naphthalene	170	260		760		42	J	110	J		
4-Chloroaniline	170				R		1		R		
Hexachlorobutadiene	170										
Caprolactam	170		UL							1	
4-Chloro-3-methylphenol	170			1		. M		× .			
2-Methylnaphthalene	170	160	J	480		38	J	85	J		
Hexachlorocyclopentadiene	170			-	R		UJ	l	R		1
2,4,6-Trichlorophenol	170										1
2,4,5-Trichlorophenol	170				1		1				1
1,1'-Biphenyl	170	40	J	150	J		ı				1
2-Chloronaphthalene	170			in .		1	ı				
2-Nitroaniline	330										
Dimethylphthalate	170		UL	S= 10	k.			44	J		l
2,6-Dinitrotoluene	170									1	
Acenaphthylene	170	240	8 -	550	1.0	65	J	61	J		
3-Nitroaniline	330										
Acenaphthene	170	440	5	1100		85	J	180	J		

SDG: C0092

Site:

LEMON RIDGE GARDEN

Lab.:

MITKEM

Sample Number :		C0092	*****	C0093	********	C0094	~~~	C0095			
Sampling Location : (Prefix: LRGI)		-SS-08		-SS-09		-SS-10		-SS-11			
Matrix:		Soil		Soil		Soil		Soil			
Units:		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		12/22/2008	3	12/22/2008		12/22/200	08	12/22/2008			
Time Sampled :		13:30		11:55		12:20	5010	13:00			
%Moisture :		23		25		20		26			2000
Dilution Factor :	23	1.0/2.0		1.0/20.0		0.98/1.97		1.0/10.0			
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	330				R		R	1	R		
4-Nitrophenol	330							- 3			
Dibenzofuran	170	340	L	880		65	J	94	J		
2,4-Dinitrotoluene	170										
Diethylphthalate	170		UL								
Fluorene	170	520	L	820		70	J	100	J		
4-Chlorophenyl-phenylether	170		UL								
4-Nitroaniline	330										
4,6-Dinitro-2-methylphenol	330				UJ		UJ		UJ		
N-Nitrosodiphenylamine	170					l					
1,2,4,5-Tetrachlorobenzene	170										
4-Bromophenyl-phenylether	170		UL								
Hexachlorobenzene	170										
Atrazine ·	170							20.5			
Pentachlorophenol	330				UJ		UJ		UJ	į į	
Phenanthrene	170	3300		16000 +	-	1500		2300	8 1		l
Anthracene	170	1200		1900		230		320			1
Carbazole	170	650	L	670		120	J	230	J		
Di-n-butylphthalate	170	48	J	750				230	В		1
Fluoranthene	170	5300 +		14000 +	J	2000		2900	J		-
Pyrene	170	6500 +	J	21000 +	J	2400 +	J	4600 +	J		1
Butylbenzylphthalate	170	28	J	500	J	300	J	1100	J	1	l
3,3'-Dichlorobenzidine	170				R.		UJ	555555555555	R		1
Benzo(a)anthracene	170	3000	L	10000 +	J	1400	J	2900	J		1
Chrysene	170	2800	L	8100 +	J	1400	J	2600	J	l	1
Bis(2-ethylhexyl)phthalate	170	120	В	750	J	380	В	17000 +	J		
Di-n-octylphthalate	170		UL		UJ		UJ	960	J		1
Benzo(b)fluoranthene	170	2800	J	11000 +	J	2300	J	3300 +	J	l	1
Benzo(k)fluoranthene	170	2100	J	4100 +	J	700	J	2200	J		1
Benzo(a)pyrene	170	2600	L	4800 +	J	960	J	2200	J	1	1
Indeno(1,2,3-cd)pyrene	170	1500	L	2600	J	420	J	990	J		1
Dibenzo(a,h)anthracene	170	710	L	1100	J	170	J	320	J		1
Benzo(g,h,i)perylene	170	890	L	310	J	82	J	270	J		1
2,3,4,6-Tetrachlorophenol	170										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

^{+ =} Results reported from dilution

Appendix C

Chain-of-Custody Records

U.S. EPA Region III Analytical Request Form Revision 10.06

TA ELLA EL		NOT#
14 DAVS		DAS#
Analytical TA	CT4439	RAS#
SE ONLY	ASQAB USE ONLY	

	0146					
Date: 12/9/2008	Site Activity	Site Activity: EPA R3-Lead Targeted Brownfields Assessment	vnfields Assessment			
Site Name: Lemon Ridge Garden	idge Garden		Street Address: Ridge Ave and Mt. Vernon St.	e and Mt. Vernon	St.	
City: Philadelphia		State: PA	Latitude:		Longitude:	
Program: Brownfields		Acct. #: 2009 B 03N 402D43C 0300BZ00	0300BZ00	CERCLIS #: BROWNFIELDS	OWNFIELDS	
Site ID:		Spill ID:		Operable Unit:		
Site Specific QA Plan Submitted:	□ No ⊠Ye	Title: SAP for Phase II ESA at Lemon Ridge Gardens, Inc.	SA at Lemon Ridge Gard	dens, Inc.	Date Approved: submitted 11/2008, pending	008, pending
FDA Project Leader: Phil Rotstein	Phil Rotstein	Phone#: 215-814-3232	Cell Phone #:		E-mail: Rotstein.Phil@epamail.epa.gov	įον
Reguest Preparer: Megan Ritchie	egan Ritchie	Phone#: 610-382-1527	Cell Phone #:		E-mail: megan.ritchie@tetratech.com	1
Site I eader Andy F	Andy Frebowitz	Phone#: 610-382-1170	Cell Phone #:		E-mail: andy.frebowitz@tetratech.com	B
Contractor: TiNIIS - Suh: Etech - Prime	Sub: Etech - Prime	EPA CO/PO: Chris	EPA CO/PO: Chris Nolte/Megan Quinn - EPA HQTRS	A HQTRS		
#Samples 74	Matrix: soil	Parameter: TCL VOC*	C*	MITKEM	Method: SOM01.2	4131
#Samples 74	Matrix: soil	Parameter: TCL SVOC*	0C*		Method: SOM01.2	30015
	Matrix: soil	Parameter: TAL Me	TAL Metals/Mercury*	DATAC	Method: ILM05.4 ICP-AES	219
	Matrix:	Parameter:			Method:	
#Samples	Matrix:	Parameter:			Method:	
#Samples	Matrix:	Parameter:			Method:	
#Samples	Matrix:	Parameter:			Method:	
#Samples	Matrix:	Parameter:			Method:	
#Samples	Matrix:	Parameter:			Method:	
Ship Date From: 12/18/08	18/08 Ship Date To:	12/22/08	Org. Validation Level N	M2	Inorg. Validation Level 1M1	
Unvalidated Data Requested:	quested: No Yes	If Yes, TAT Needed: 14days	ays 7days 72hrs	48hrs 24hrs	us Other (Specify)	
Validated Data Package Due:	42 days		s Other (Specify)	141	16	
Electronic Data Deliverables Required:	Required: No	Yes (EDDs will be provid	(EDDs will be provided in Region 3 EDD Format)	mat)		
Special Instructions:	Special Instructions: *See attached tables for compound list and detection limits	ound list and detection limits.				
Samples submitted to (Brownfields monies (212-566-2025). The	the CLP for analysis will be Costs associated with SMC point-of-contact for ESAT f	Samples submitted to the CLP for analysis will be paid for using EPA HQTRS funds and CLP data will be validated by ESA (Brownfields monies). Costs associated with SMO support will also be paid for using HQTRS funds. The point-of-contact (212-814-3359). The point-of-contact for ESAT funding issues is Drew Lausch, EPA R3 TBA Coordinator (215-814-3359).	nds and CLP data will be sing HQTRS funds. The EPA R3 TBA Coordinate	validated by ESA1 point-of-contact for (215-814-3359).	Samples submitted to the CLP for analysis will be paid for using EPA HQTRS funds and CLP data will be validated by ESAT using EPA R3's "ESAT buy-in" funding (Brownfields monies). Costs associated with SMO support will also be paid for using HQTRS funds. The point-of-contact for CLP and SMO funding issues is Danita Bowling (212-566-2025). The point-of-contact for ESAT funding issues is Drew Lausch, EPA R3 TBA Coordinator (215-814-3359).	ling nita Bowling
		18			¥	

Organic Traffic Report & Chain of Custody Record

DAS No: Case No: 38146

Context Context Criscopy Context Context Context Criscopy Context Context Criscopy Context C				THE PROPERTY AND ADDRESS.						Unintilde	011	The Art	Caminata la	THE CHATCH COM
Code: C1433 Code: C1433	ced?	Shipment lo				9 = 0		Type/Designate:), H = High	w. M = Low/Medium	L=10	ntration:	Concer	Analysis Key:
Code: C1433 Code: C1433 Code: C1433 Code: C1433 Code: C1433 Code: C1433 Code: C1433 Code: C1433 Code: C1433 Code: C1434													C0087	Sipas
Tracker Cortex	istody Seal Number:	Chain of Cur					er Signature(s):	Additional Sample		laboratory QC:	used for	(s) to be u	Sample	Shipment for Case
Corder C14,339	REPRESENTATION OF THE PROPERTY AND ADDRESS OF THE PROPERTY OF		MICOGO	9.15	2/2/2/2008	Ņ	LRGI-SS-01	708 (Ice Only), 710	707 (Ice Only), Only), 709 (Ice (Ice Only) (4)	A (14), VOA (14)	N.	VG	Soil (0*-12*)/ Megan Ritchie	C0080
Date Shipped to Critical Critical Code: Critical Criti		, 6	MC007	11:05	12/22/2008	, i	LRGI-SB-07-0203	703 (Ice Only), 705	702 (Ice Only). Only), 704 (Ice (Ice Only) (4)	A (14), VOA (14)	BN	Le	Soil (>12*)/ Megan Ritchie	C0079
Code: CT4439	3.	æ	MC007	10:20	12/22/2008	လ္	LRGI-SB-06-0203	698 (Ice Only), 700	697 (Ice Only), Only), 699 (Ice (Ice Only) (4)	A (14), VOA (14)	BN	L/G	Soil (>12")/ Megan Ritchie	C0078
Date Shipped: 1222/2008 Control	4)	7	MC007	9:50	12/22/2008	Ś	LRGI-SB-05-0203	693 (Ice Only), 695	692 (Ice Only), (1) Only), 694 (Ice (Ice Only) (4)	A (14), VOA (14)	BN	D/G	Soil (>12*)/ Megan Ritchie	C0077
Code: C74439	Įi.	o.	MC007t	9:20	12/22/2008	Ś	LRGI-SB-04-0203	688 (Ice Only), 690	687 (Ice Only), I Only), 689 (Ice (Ice Only) (4)	A (14), VOA (14)	BN	L/G	Soil (>12")/ Megan Ritchie	C0076
Crit4339	ŧ	5	MC007	9:00	2/22/2008	ίờ	LRGI-SB-03-0203	683 (Ice Only), 685	682 (Ice Only), (Only), 684 (Ice Only), 684 (Ice Only)	A (14), VOA (14)	BN	L/G	Soil (>12*)/ Megan Ritchie	C0075
CT4439	ŧ	4	MC007	8:40	2/22/2008	is.	LRGI-SB-02-0203	678 (Ice Only), 680	677 (Ice Only); (Only), 679 (Ice Only), 679 (Ice Only)	4 (14), VOA (14)	BN	L/G	Soil (>12*)/ Megan Ritchie	C0074
C14439	ji.	· 3	MC0073	8:25	2/22/2008	Ś	LRGI-SB-01-0203	673 (Ice Only), 675	672 (Ice Only), (Only), 674 (Ice Only), 674 (Ice Only)	4 (14), VOA (14)	BN/	L/G	Soil (>12*)/ Megan Ritchie	C0073
Date Shipped: 12/22/2008	Field Duplicate	N	MC0072	15:25	2/22/2008	s:	LRGI-DUP-02	668 (Ice Only), 670	667 (Ice Only), (Only), 669 (Ice Only)	4 (14), VOA (14)	BN	L/G	Soil (>12")/ Megan Ritchie	C0072
Code: CT4439 t Code: CT4417 t Code: CT4439 t Code: CT4417 t Code: CT4417 t Code: CT4439 t Code: CT417 t Code:	Field Duplicate		MC0071	10:00	2/22/2008	Š	LRGI-DUP-01	663 (Ice Only), 665	662 (Ice Only), t Only), 664 (Ice ((Ice Only) (4)	4 (14), VOA (14)	BN/	ĽG	Soil (>12")/ Megan Ritchie	C0071
Date Shipped: 12/22/2008 Code: CT4439 Code: 2009B03W402D43C0300BZ00 Carrier Name: FedEx Relinquished By (Date / Time) Received By	OC Type	RE No.	INOF SAMI	MINE OTTECL	SAMPLE DATE		STATION LOCATION	No./ NE/ Bottles	TAG N PRESERVATI	ANALYSIS/ TURNAROUND		CONC	MATRIX/ SAMPLER	ORGANIC SAMPLE No.
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Code: CT4439 Carrier Name: FedEx 12/22/2008 Code: 2009B03W402D43C0300BZ00 Airbill: 8641-8687-4417 Code: 2009B03W402D43C0300BZ00 Code: 2009B03W402D43C030BZ00 Code: 2009B03W402D43C030BZ00 Code: 2009B03W402D43C030BZ00 Code: 2009B03W402D43C030BZ00 Code: 2009B03W402D43C030BZ00 Code: 2009B03W402D43C03D43C			105 (630	E1413		Lan	Blvd.	Mitkem Corporati 175 Metro Center Warwick RI 0288	Shipped to:		6)/PA	dge (3814		Spill ID: Site Name/State:
Code: CTA/20 Carrier Name: FedEx		Received E	/ Time)	(Date	ed By	quish	Relin	8641-8687-4417	Airbill:	Z00	C0300B	402D43C	2009B03W	Account Code:
Chain of Custody Decord		Signature		y Record	Custody	in of	Cha	12/22/2008 FedEx	Date Shipped:				3	Region: Project Code:

BNA = CLP TCL Semivolatiles, VOA = CLP TCL Volatiles

TR Number: 3-550332179-122208-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

TOTON CON

Organic Traffic Report & Chain of Custody Record

DAS No: Case No: 38146

Shipment for Case	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
	C0087		
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?
BNA = CLP TCL Semi	BNA = CLP TCL Semivolatiles, VOA = CLP TCL Volatiles		
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CEPA USEPA Contract Laboratory Program Organic Traffic Report & Chain of Custody Record

DAS No: Case No: 38146

Region:	3			Date Shipped: 12/22/2008	^	hain	Chain of Custody Record	Record		Sampler Signature: Llegox	Rithie	
Account Code:	CT4439 2009B03W402D43C0300BZ00)2D43C(300BZ00	Airbill: 8641-8687-4417	-	Relinqui	Relinquished By	(Date / Time)		Received By	(Date / Time)	NAME OF TAXABLE PARTY.
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Spill ID:	00				lvd.	,						nage of a
Site Name/State:	:: Lemon Ridge (38146)/PA	e (38146)/PA	Warwick RI 02886		,						mon
Project Leader:	Andy Frebowitz	vitz		(401) /32-3400		ω						DECEMBER OF THE PARTY OF THE PA
Action:	Brownfields Site	Site										maraka
Sampling Co:	Tetra Tech NUS, Inc	NUS, Inc		30		4					A PERSONAL WEST CONTRACTOR AND ADDRESS OF THE PERSONAL PROPERTY.	Бене
ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION		SAMPLE DATE	SAMPLE COLLECT DATE/TIME	SAMP	INORGANIC SAMPLE No.	Type	5
C0090	Soil (>12")/ Megan Ritchie	ΓG	BNA (14), VOA (14)	773, 774 (Ice Only), 775 (Ice Only), 776 (Ice Only) (4)	LRGI-SB-10-0203		S: 12/22/2008 12:10		MC0090		:	
C0091	Soil (>12")/ Megan Ritchie	VG	BNA (14), VOA (14)	778 (Ice Only), 779 (Ice Only), 780 (Ice Only), 781 (Ice Only) (4)	LRGI-SB-11-0203		S: 12/22/2008	12:45	MC0091	2	Ī	
C0092	Soil (0*-12*)/ Megan Ritchie	√ 6	BNA (14), VOA (14)	783 (Ice Only), 784 (Ice Only), 785 (Ice Only), 786 (Ice Only) (4)	LAGI-SS-08	co	S: 12/22/2008		MC0092		1	
C0093	Soil (0*-12*)/ Megan Ritchie	L/G	BNA (14), VOA (14)	788 (Ice Only), 789 (Ice Only), 790 (Ice Only), 791 (Ice Only) (4)	LAGI-SS-09	Ø	S: 12/22/2008	11.55	MC0093		1	
C0094	Soil (0"-12")/ Megan Ritchie	L/G	BNA (14), VOA (14)	793 (Ice Only), 794 (Ice Only), 795 (Ice Only), 796 (Ice Only) (4)	LRGI-SS-10	co.	S: 12/22/2008		MC0094		i	
C0095	Soil (0*-12*)/ Megan Ritchie	\ G	BNA (14). VOA (14)	798 (Ice Only), 799 (Ice Only), 800 (Ice Only), 801 (Ice Only) (4)	LRGI-SS-11	(A)	S: 12/22/2008	13:00	MC0095		1	

Complete? Y C0087 C0087 Concentration: L = Low, M = Low/Medium, H = High Type/Designate: Composite = C, Grab = G Shipmen, L2 Shipmen, L2	Shipment for Case	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Concentration: L = Low, M = Low/Medium, H = High	Complete? Y			
Concentration: L = Low, M = Low/Medium, H = High		C0087		
	Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipmen 22

TR Number: 3-550332179-122208-0002
PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

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F2V5.1.047 Page 3 of 3



"Ritchie, Megan" <Megan.Ritchie@tetratech.co

01/07/2009 11:52 AM

To Lisa Penix/ESC/R3/USEPA/US, Khin-Cho Thaung/ESC/R3/USEPA/US@EPA, Chris Nolte/RTP/USEPA/US@EPA, Megan

cc Dan Slizys/ESC/R3/USEPA/US@EPA, John Kwedar/ESC/R3/USEPA/US@EPA, Carroll Harris/ESC/R3/USEPA/US@EPA, Victor

bcc

Subject RE: Clarification needed for RAS case 38146 - Lemon Ridge Garden Brownfields

Lisa,

The field duplicate pairs for 38146 are:

MC0071 and MC0077 C0071 and C0077 MC0072 and MC0086 C0072 and C0086

Thank you, Megan

----Original Message----

From: Penix.Lisa@epamail.epa.gov [mailto:Penix.Lisa@epamail.epa.gov]

Sent: Wednesday, January 07, 2009 11:06

To: Thaung.Khin-Cho@epamail.epa.gov; Nolte.Chris@epamail.epa.gov; Quinn.Megan@epamail.epa.gov; Rotstein.Phil@epamail.epa.gov Cc: Slizys.Dan@epamail.epa.gov; Kwedar.John@epamail.epa.gov; Harris.Carroll@epamail.epa.gov; Yastrop.Victor@epamail.epa.gov; Snyder.Judy@epamail.epa.gov; Ritchie, Megan; Frebowitz, Andy Subject: Clarification needed for RAS case 38146 - Lemon Ridge Garden

Brownfields

Disclaimer: Information contained below does not constitute technical

The Sampling/Field direction.

contractor shall contact their applicable EPA Contracting Officer

Representative (COR) for technical direction

Case: 38146

Lab: DATAC; MITKEM SDGs: MC0071; C0071

Site: Lemon Ridge Garden Brownfields EPA Project Leader: Phil Rotstein Site Leader: Andrew Frebowitz

Clarification is needed for this case.

- 1. Sample number MC0071 is listed on TR # 3-550332179-122208-0001 .; Duplicate" but the duplicate pair is not given.
- Sample number MC0072 is listed on TR # 3-550332179-122208-0001 as a "Field Duplicate" but the duplicate pair is not given.
- 3. Sample number C0071 is listed on TR # 3-550332179-122208-0002 as a "Field Duplicate" but the duplicate pair is not given ...

4. Sample number C0072 is listed on TR # 3-550332179-122208-0002 as a "Field Duplicate" but the duplicate pair is not given..

Please feel free to contact me with any questions.

Lisa D. Penix
ESAT Region 3
Lockheed Martin Enterprise Solutions & Services EPA Environmental Science Center
701 Mapes Road
Fort Meade, MD 20755
Telephone (410) 305 - 3020
Fax (410) 305 - 3095
email: Penix.Lisa@epamail.epa.gov

Agnes Huntley [Mitkem]

From:

Walsh, Colin [cwalsh20@fedcsc.com]

Sent:

Monday, December 29, 2008 8:37 AM

To:

Agnes Huntley [Mitkem]

Cc:

slizys.dan@epa.gov; Harris.Carroll@epamail.epa.gov; thaung.khin-cho@epa.gov;

kwedar.john@epa.gov

Subject: Region 03 | Case 38146 | Lab MITKEM | Issue Insufficient/inappropriate designation of laboratory

QC | FINAL

Agnes,

Sorry for the delay. You sent the issue below to my other CSC email address, so I didn't see it until now.

Summary Start

Issue: Laboratory QC is designated on the TR/COC for VOA/SVOA sample C0087; however, the Scheduling Notification indicates that laboratory QC is not required for VOA/SVOA.

Resolution: In accordance with previous direction from Region 3, the laboratory will note the issue in the Case/SDG Narrative and proceed with the analysis of the samples. This Region only requires laboratory QC on the Pest and/or ARO fraction for Organic analysis. The resolution will be applied to all TR/COCs received for this Case that designate a sample for VOA, TVOA, and/or SVOA laboratory QC.

Summary End

Please let me know if you have any further questions or problems.

Thanks,

Colin

Colin G. Walsh **Environmental Coordinator - Region 3** CSC

15000 Conference Center Drive, Chantilly, VA 20151 Civil Division | (p) 703-818-4544 | (f) 703-818-4602 | cwalsh20@fedcsc.com | www.csc.com

From: Colin Walsh [mailto:cwalsh20@csc.com] Sent: Monday, December 29, 2008 8:29 AM

To: Walsh, Colin

Subject: Fw: Case 38146

Colin G. Walsh Environmental Coordinator - Region 3 CSC

15000 Conference Center Drive, Chantilly, VA 20151 Civil Division | (p) 703-818-4544 | (f) 703-818-4602 | cwalsh20@fedcsc.com | www.csc.com This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery.

NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

---- Forwarded by Colin Walsh/CIV/CSC on 12/29/2008 08:28 AM ----

"Agnes Huntley [Mitkem]" <agnes_ng@mitkem.com>

To Colin Walsh/CIV/CSC@CSC

CC

12/23/2008 03:54 PM

Subject Case 38146

HI Colin,

Sample C0087 is designated as the sample for laboratory QC. The analyses for this sample are VOA and SVOA. The scheduling notification form notes that laboratory QC is not required for VOA and SVOA. Are we to perform laboratory QC?

Thank you,

Agnes (Ng) Huntley

LG Project Manager

Mitkem faboratories

A Division of Spectrum Analytical, Featuring Hanibal Jechnology

(P) 401-732-3400 x316

(G) 401-732-3499

This message is intended for the use of the individual to whom it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone at 401-732-3400

12/29/2008

Appendix D

Laboratory Case Narrative

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 38146 and SDG# C0071. Analyses were performed for twenty soil samples that were received on December 23, 2008. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that two sample-shipping coolers were received on December 23. The coolers were measured at 2°C and 3°C.

Sample C0087 is designated as the sample for laboratory QC. The scheduling notification form notes that laboratory QC is not required for the VOA and SVOA analysis. Per the Region, laboratory QC is not required for VOA and SVOA.

The following samples are submitted in this data package:

	Lab ID	A	nalysis
	G2408-01A		S
	G2408-01B	V	7
	G2408-02A		S
	G2408-02B	7	
	G2408-02BRA		7
	G2408-03A		\mathbf{S}
	G2408-03ADL		S
	G2408-03B	7	7
	G2408-03BRA		7
	G2408-04A		S
	G2408-04B	7	7
	G2408-04BRA	. \	7
	G2408-05A		S
	G2408-05B	1	1
	G2408-05BRA	. \	1
	G2408-06A		S
	G2408-06B	1	I
	G2408-06BRA	. \	I
	G2408-07A		S
	G2408-07B	7	7
	G2408-07BRA	. 1	7 -
25	G2408-08A		S
	G2408-08B	7	1
	G2498-08BRA	. 7	7
	G2408-09A		S
	G2408-09B	7	J
	G2408-09BRA	, ,	I
	G2408-10A		S
	G2408-10B	V	V
		G2408-01A G2408-01B G2408-02A G2408-02B G2408-02BRA G2408-03A G2408-03ADL G2408-03B G2408-03BRA G2408-04B G2408-04B G2408-05A G2408-05B G2408-05B G2408-06B G2408-06B G2408-06B G2408-07A G2408-07B G2408-07B G2408-07B G2408-07B G2408-08B G2408-08B G2408-08B G2408-08B G2408-09B G2408-09B G2408-09B G2408-09BRA G2408-09BRA	G2408-01A G2408-01B G2408-02A G2408-02B G2408-02BRA G2408-03A G2408-03A G2408-03B G2408-03BRA G2408-04B G2408-04B G2408-05B G2408-05B G2408-05B G2408-06A G2408-06B G2408-06B G2408-07A G2408-07B G2408-07B G2408-08B G2408-08B G2408-08B G2408-09B G2408-09B G2408-09BRA G2408-09BRA G2408-09BRA G2408-09BRA G2408-09BRA G2408-09BRA G2408-09BRA G2408-09BRA G2408-09BRA

C0081	G2408-11A	S
C0081DL	G2408-11ADL	S
C0081	G2408-11B	V
C0082	G2408-12A	S
C0082	G2408-12B	V
C0084	G2408-13A	S
C0084DL	G2408-13ADL	S
C0084	G2408-13B	V
C0084RE	G2408-13BRA	V
C0085	G2408-14A	S
C0085DL	G2408-14ADL	S
C0085	G2408-14B	V
C0085RE	G2408-14BRA	V
C0086	G2408-15A	S
C0086	G2408-15B	V
C0087	G2408-16A	S
C0087DL	G2408-16ADL	S
C0087	G2408-16B	V
C0088	G2408-17A	S
C0088DL	G2408-17ADL	S
C0088	G2408-17B	V
C0088RE	G2408-17BRA	V
C0089	G2408-18A	S
C0089DL	G2408-18ADL	S
C0089	G2408-18B	V
C0089RE	G2408-18BRA	V
C0090	G2408-19A	S
C0090DL	G2408-19ADL	S
C0090	G2408-19B	V
C0090RE	G2408-19BRA	V
C0091	G2408-20A	S
C0091	G2408-20B	V

V = Low/Medium Volatiles

S = Semivolatiles

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Low/Med Volatile Analysis:

Trap used for instrument V5: OI Analytical #10 trap containing 8 cm each of Tenax, silica gel and carbon molecular sieve.

cis-1,3-Dichloropropene-d4 was detected in method blanks and in samples. The volatile organic deuterated monitoring compound spike solution contains both the cis- and trans-1,3-dichloropropene isomers. cis-1,3-Dichloropropene-d4 is not a dueterated monitoring compound for SOM01.2, while the trans isomer is. The cis isomer is considered a laboratory artifact, and is not reported as a tentatively identified compound.

GC column used: 30 m x 0.25 mm id (1.4 um film thickness) DB-624 capillary column.

The following equation was used to calculate the concentration of target analytes for low-level soil samples:

Concentration
$$(\mu g/Kg) = \frac{(Amt)(DF)(UF)(5)}{(\frac{Ws*(100-M)}{100})}$$

where: Amt = on-column amount on raw data

DF = Dilution factor

UF = ng unit correction factor

Ws = Weight of sample extracted (g)

M = %moisture (not decanted)

The following equation was used to calculate the Amt in the previous equations:

$$Amt = \frac{(A_x)(IS)}{(A_{is})(RRF)}$$

where: A_x = area of the characteristic ion for the compound to be measured A_{is} = area of the characteristic ion for the associated internal standard IS = concentration of internal standard in ug/L RRF = relative response factor

The VOA soil sample was received in Encore. The samples were logged in, labeled and transferred to the VOA laboratory. Once in the VOA lab, the samples were extruded into pre-weighed VOA vials and then frozen until time of analysis.

DMC recoveries were within the QC limits with the exception of high recovery of vinyl chloride-d3, chloroethane-d5, benzene-d6 and 1,2-dichloropropane-d6 in sample C0072, high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, benzene-d6, 1,2dichloropropane-d6 and toluene-d8 and low recovery of 2-hexanone-d5 in sample C0073, high recovery of vinvl chloride-d3, chloroethane-d5, 1,1-dichloroethene-d2, chloroformd, benzene-d6, 1,2-dichloropropane-d6, toluene-d8 and 1,4-dioxane-d8 and no recovery of 2-hexanone-d5 and 1,2-dichlorobenzene-d4 in sample C0074, high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, 1,2-dichloroethane-d4, benzene-d6, 1,2dichloropropane-d6 and 1,1,2,2-tetrachloroethane-d2 and no recovery of trans-1,3dichloropropene-d4, 2-hexanone-d5 and 1,4-dioxane-d8 in sample C0075, high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, 1,2-dichloroethan-d4, benzene-d6, 1,2-dichloropropane-d6, toluene-d8 and 1,1,2,2-tetrachloroethane-d2 and no recovery of trans-1,3-dichloropropene-d4, 2-hexanone-d5, 1,4-dioxane-d8 and 1,2-dichlorobenzened4 in sample C0076, high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, 1,2-dichloroethan-d4, benzene-d6, 1,2-dichloropropane-d6 and 1,1,2,2-tetrachloroethaned2, low recovery of trans-1,3-dichloropropene-d4 and no recovery of 2-hexanone-d5, 1,4dioxane-d8 and 1,2-dichlorobenzene-d4 in sample C0077, high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, 1,2-dichloroethane-d4, benzene-d6, 1,2dichloropropane-d6, 1,4-dioxane-d8, 1,1,2,2-tetrachloroethane-d2 and 1,2dichlorobenzene-d4, low recovery of trans-1,3-dichloropropene-d4 and no recovery of 2hexanone-d5 in sample C0078, high recovery of high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, 1,2-dichloroethane-d4, 1,2-dichloropropane-d6 and 1.1,2,2-tetrachloroethane-d2 and low recovery of toluene-d8 in sample C0079, high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, 1,2-dichloroethane-d4 and 1,2-dichloropropane-d6 in sample C0084, high recovery of chloroethane-d5, chloroformd. 1,2-dichloroethane-d4, benzene-d6, 1,2-dichloropropane-d6 chloroethane-d5, chloroform-d, 1,2-dichloroethane-d4 and 1,2-dichloropropane-d6 in sample C0085, high recovery of 1,2-dichloropropane-d6 and low recovery of 2-hexanone-5 in sample C0088, high recovery of vinyl chloride-d3, chloroethane-d5, chloroform-d, benzene-d6, 1,2dichloropropane-d6 and toluene-d8, low recovery of 2-butanone-d5 and trans-1,3dichloropropene-d4 and no recovery of 2-hexanone-d5 in sample C0089 and high recovery of vinyl chloride-d3, chloroethane-d5, 1,2-dichloroethane-d4, benzene-d6 and 1,2-dichloropropane-d6, low recovery of trans-1,3-dichloropropene-d4 and no recovery of 2-hexanone-d5 in sample C0090. Matrix interference confirmed on DMC recoveries for samples C0072, C0073, C0074, C0076, C0077, C0078 and C0079 as the samples were re-analyzed with similar findings.

Internal standard area counts were within QC criteria with the exception of samples C0072, C0073, C0074, C0075, C0076, C0077, C0078, C0079, C0084, C0085, C0088, C0089 and C0090. Matrix interference confirmed on internal standard area counts for samples C0072, C0073, C0074, C0075, C0076, C0077, C0078, C0079, C0084, C0085, C0088, C0089 and C0090, as the samples were re-analyzed with similar findings.

For 1,4-dioxane and 1,4-dioxane-d8, the laboratory was unable to meet the minimum average RRF of 0.0050 in the initial calibration. In our experience, this compound will not reliably achieve the SOM method performance criteria due to its high water solubility. This compound is able to be reliably analyzed as an extractable semivolatile organic compound.

Ion 100 was used instead of ion 63 for 1,1-dichloroethene-d2. Ion 100 was used instead of ion 63 due to the interference with target compound 1,1-dichloroethene in the calibration standards.

The re-analysis for samples C0072, C0073, C0074, C0075, C0076, C0077, C0078, C0079, C0084, C0085, C0088, C0089 and C0090 are billable. The re-analyses were performed to demonstrate matrix interference on DMC recoveries and/or internal standard area counts. Matrix interference confirmed on DMC recoveries and/or internal standard area counts for samples C0072, C0073, C0074, C0075, C0076, C0077, C0078, C0079, C0084, C0085, C0088, C0089 and C0090, as the re-analyses exhibited findings similar to those of the initial analysis.

No manual integrations were performed.

No other unusual observation was made for the analysis.

3. Semivolatile Analysis:

GC column: 30 m x 0.25 mm id (0.5 um film thickness) DB-5MS capillary column

The following equation was used to calculate the concentration of target analytes for soil samples:

Concentration
$$(\mu g/Kg) = (Amt)(DF)(Uf)\left(\frac{V_t}{V_i}\right)\left(\frac{1}{Ws}\right)\left(\frac{100}{(100-m)}\right)$$

where: Amt = on-column amount on raw data

DF = Dilution factor

UF = ng unit correction factor

Ws = Weight of sample extracted (g)

M = %moisture (not decanted)

The following equation was used to calculate the Amt in the previous equations:

$$Amt = \frac{(A_x)(IS)}{(A_x)(RRF)}$$

where: A_x = area of the characteristic ion for the compound to be measured

A_{is} = area of the characteristic ion for the associated internal standard

IS = concentration of internal standard in ug/L

RRF = relative response factor

Alkanes were determined are part of tentatively identified compounds. The alkanes are reported on the Alkane Narrative Report following the SDG narrative.

DMC rerecoveries were within the QC limits with the exception low recovery of 4-chloroaniline-d4 in sample C0081 and DMCs diluted in the diluted analysis for samples C0085, C0088 and C0084.

Sample C0088 was initially analyzed at 30x dilution.

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: C0073 (8x), C0081 (2x), C0084 (100x), C0085 (8x), C0087 (2x), C0088 (120x), C0089 (16x) and C0090 (2x).

2,4-Dinitrophenol, hexachlorocyclopentadiene, 4,6-dinitro-2-methylphenol and 4,6-dinitro-2-methylphenol-d2 exceeded the %D criteria in closing CCV SSTD0204J and 2,4-dinitrophenol and hexachlorocyclopentadiene exceeded %D criteria in closing CCV SSTD0204L. The associated samples were re-analyzed in which the opening CCVs, SSTD0204I and SSTD0204K were method compliant. Following the analysis of the samples, the ending CCVs SSTD0204J and SSTD0204M did not meet the %D criteria.

Manual integration was performed on the following:

C0071: benzo (b), fluoranthene and benzo (k) fluoranthene due to M2

C0072: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0073: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0073DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0074: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0075: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0077: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0078: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0079: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0080: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0081: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0081DL: butylbenzylphthalate due to M1 and benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0082: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0084: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0084DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0085: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0085DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0086: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0087: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0087DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0088: 4-methylphenol-d8, 4,6-dinitro-2-methylphenol-d8 due to M6 and benzo (b)

fluoranthene and benzo (k) fluoranthene due to M2

C0088DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0089: butylbenzylphthalate due to M1 and benzo (b) fluoranthene and benzo (k)

fluoranthene due to M2

C0089DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0090: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0090DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0091: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

SSTD0204J: hexachlorocyclopentadiene due to M6 and 2,4-dinitrophenol due to M7.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Agnes Huntley

CLP Project Manager

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01/05/09

ALMANE MARRADIVE FEFORE Report Date: 01/08-2309 SDG: 00071

Client Sample ID: 00072	lab Sample II:	23173-073	File II: S4D1435.0
Compound	Tan Campie II.	Est. Conc.	0
Straight-chain Alkane	14.746		J
Straight-chain Alkane	16.185		-
Straight-chain Alkane	16.692		J
Straight-chain Alkane	18.836	5.70	J
Client Sample ID: C0031	Lab Sample ID:	G2408-11A	File ID: S4D1496.D
Compound	RT		Q
Straight-chain Alkane	14.756	2000	J
Straight-chain Alkane	16.216		J
The state of the s			
Client Sample ID: C0081DL	Lab Sample ID:	G2409-11ADL	File ID: S4D1513.D
Compound	RT	Est. Conc.	Q
Straight-chain Alkane	11.434	260	DJ
Straight-chain Alkane	. 14.187		DJ
Straight-chain Alkane	14.715	2200	DJ
Straight-chain Alkane	16.154	1200	DJ
Client Sample ID: C0082	Lab Sample ID:	G2408-12A	File ID: S4D1488.D
Compound	RT	Est. Conc.	Q
Straight-chain Alkane	14.746	94	J
Straight-chain Alkane	16.185	200 -	J
Client Sample ID: C0084	Lab Sample ID:	G2408-13A	File ID: S4D1498.D
Compound	RT	Est. Conc.	Q
Straight-chain Alkane	16.237	1800	J
	*		
Client Sample ID: C0086	Lab Sample ID:	G2408-15A	File ID: S4D1487.D
Compound	RT	Est. Conc.	Q
Straight-chair Alkane	14.746	120	J
Straight-chain Alkane	16.185	720	J
Straight-chain Alkane	16.692	140	J
Straight-chain Alkane	15.876	1000	. J

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 38146 and SDG# C0092. Analyses were performed for twenty soil samples that were received on December 23, 2008. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that the sample-shipping cooler received was measured at 3°C.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
C0092	G2409-01A	S
C0092DL	G2409-01ADL	S
C0092	G2409-01B	V
C0093	G2409-02A	S
C0093DL	G2409-02ADL	S
C0093	G2409-02B	V
C0094	G2409-03A	S
C0094DL	G2409-03ADL	S
C0094	G2409-03B	V
C0095	G2409-04A	S
C0095DL	G2409-04ADL	S
C0095	G2409-04B	V

V = Low/Medium Volatiles

S = Semivolatiles

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS sig sai) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.

- M4 retention time shift.
- M5 miscellaneous under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Low/Med Volatile Analysis:

Trap used for instrument V5: OI Analytical #10 trap containing 8 cm each of Tenax, silica gel and carbon molecular sieve.

cis-1,3-Dichloropropene-d4 was detected in method blanks and in samples. The volatile organic deuterated monitoring compound spike solution contains both the cis- and trans-1,3-dichloropropene isomers. cis-1,3-Dichloropropene-d4 is not a dueterated monitoring compound for SOM01.2, while the trans isomer is. The cis isomer is considered a laboratory artifact, and is not reported as a tentatively identified compound.

GC column used: 30 m x 0.25 mm id (1.4 um film thickness) DB-624 capillary column.

The following equation was used to calculate the concentration of target analytes for low-level soil samples:

Concentration
$$(\mu g/Kg) = \frac{(Amt)(DF)(UF)(5)}{(\frac{Ws*(100-M)}{100})}$$

where: Amt = on-column amount on raw data

DF = Dilution factor

UF = ng unit correction factor

Ws = Weight of sample extracted (g)

M = %moisture (not decanted)

The following equation was used to calculate the Amt in the previous equations:

$$Amt = \frac{(A_x)(IS)}{(A_{ts})(RRF)}$$

where: A_x = area of the characteristic ion for the compound to be measured A_{is} = area of the characteristic ion for the associated internal standard IS = concentration of internal standard in ug/L RRF = relative response factor

The VOA soil sample was received in Encore. The samples were logged in, labeled and transferred to the VOA laboratory. Once in the VOA lab, the samples were extruded into pre-weighed VOA vials and then frozen until time of analysis.

Alkanes were determined are part of tentatively identified compounds. The alkanes are reported on the Alkane Narrative Report following the SDG narrative.

DMC recoveries were within the QC limits.

For 1,4-dioxane and 1,4-dioxane-d8, the laboratory was unable to meet the minimum average RRF of 0.0050 in the initial calibration. In our experience, this compound will not reliably achieve the SOM method performance criteria due to its high water solubility. This compound is able to be reliably analyzed as an extractable semivolatile organic compound.

Ion 100 was used instead of ion 63 for 1,1-dichloroethene-d2. Ion 100 was used instead of ion 63 due to the interference with target compound 1,1-dichloroethene in the calibration standards.

No manual integrations were performed.

No other unusual observation was made for the analysis.

3. Semivolatile Analysis:

GC column: 30 m x 0.25 mm id (0.5 um film thickness) DB-5MS capillary column

The following equation was used to calculate the concentration of target analytes for soil samples:

Concentration
$$(\mu g/Kg) = (Amt)(DF)(Uf)\left(\frac{V_t}{V_i}\right)\left(\frac{1}{Ws}\right)\left(\frac{100}{(100-m)}\right)$$

where: Amt = on-column amount on raw data

DF = Dilution factor

UF = ng unit correction factor

Ws = Weight of sample extracted (g)

M = %moisture (not decanted)

The following equation was used to calculate the Amt in the previous equations:

$$Amt = \frac{(A_x)(IS)}{(A_{is})(RRF)}$$

where: A_x = area of the characteristic ion for the compound to be measured A_{is} = area of the characteristic ion for the associated internal standard IS = concentration of internal standard in ug/L RRF = relative response factor

Alkanes were determined are part of tentatively identified compounds. The alkanes are reported on the Alkane Narrative Report following the SDG narrative.

DMC rerecoveries were within the QC limits with the exception low recovery of low recovery of 4-chloroaniline-d4 and high recovery of pyrene-d10 in sample C0095, low recovery of 4-chloroaniline-d4 in sample C0093 and low recovery of dimethylphthalate-d6, fluorene-d10, pyrene-d10 and benzo (a) pyrene-d12 in sample C0092. Please note that the recovery of 4-chloroaniline-d4 in sample C0093 is reported as zero on Form II. The recovery is greater than zero, but rounded down to zero for Form II.

Internal standard area counts were within QC criteria with the exception of samples C0093, C0094 and C0095. The samples were re-analyzed at dilution with similar findings.

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: C0092 (2x), C0093 (20x), C0094 (2x) and C0095 (10x).

Sample C0092 was re-extracted outside of hold time. The initial extraction was within hold time, but had non-compliant DMC recoveries. Please note that only the re-extract has been reported. The diluted analysis was performed on the re-extract.

2,4-Dinitrophenol, hexachlorocyclopentadiene, 4,6-dinitro-2-methylphenol, 4,6-dinitro-2-methylphenol-d2, pentachlorophenol, pyrene, butylbenzylphthalate, bis (2-ethylhexyl) phthalate and di-n-octylphthalate exceeded the %D criteria in closing CCV SSTD0202L. The associated samples were re-analyzed in which the opening CCVs, SSTD0202I and SSTD0202K were method compliant. Following the analysis of the samples, the ending CCVs SSTD0202J and SSTD0202L did not meet the %D criteria.

Manual integration was performed on the following:

C0092: butylbenzylphthalate due to M1 and benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0092DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2 C0093: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2 C0093DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2 C0094: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2 C0094DL: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2 C0095: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2

C0095DL: di-n-octylphthalate, benzo (b) fluoranthene and benzo (k) fluoranthene due to

SSTD0802H: benzo (b) fluoranthene and benzo (k) fluoranthene due to M2 SSTD0204P: benzo (b) fluoranthene and benzo (k) fluoranthene due to M5.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

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Agnes Huntley

CLP Project Manager

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01/05/09

ALBAME MARRATIVE REPORT

Feport Date: 01/05/2009

SDG: 00092

Glient Sample ID: GC034	<pre>lab Sample II:</pre>	G2409-03A	File ID: 82G0995.D
Compound	P.T	Est. Conc.	2
Straight-chain Alkane	19.913	1800	J 7
Straight-chain Alkane	20.601	1200	ਹ
Client Sample ID: C0094DL	Lab Sample ID:	G2409-33ADL	File ID: S2G0394.0
Compound	P.T		Q
Straight-chain Alkane	20.594	870	DJ